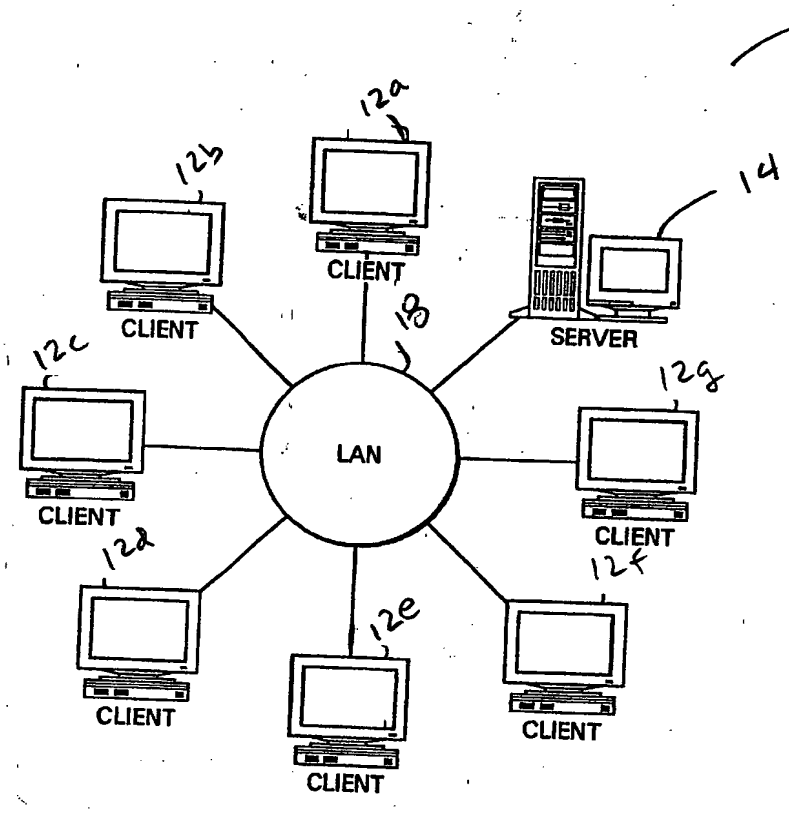


FIGURE 1

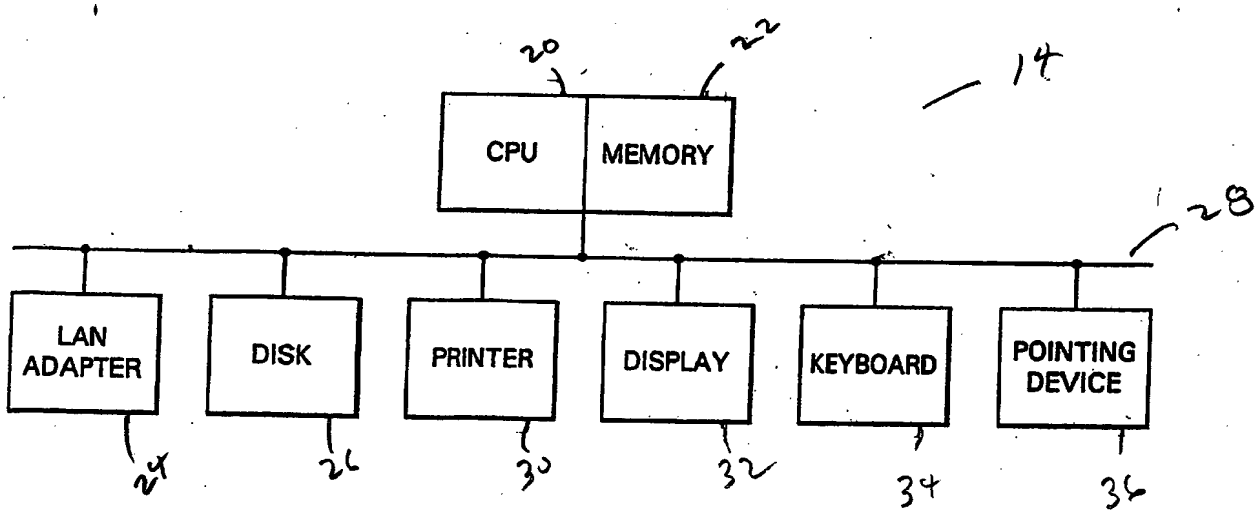


FIGURE 2

FIGURE 3

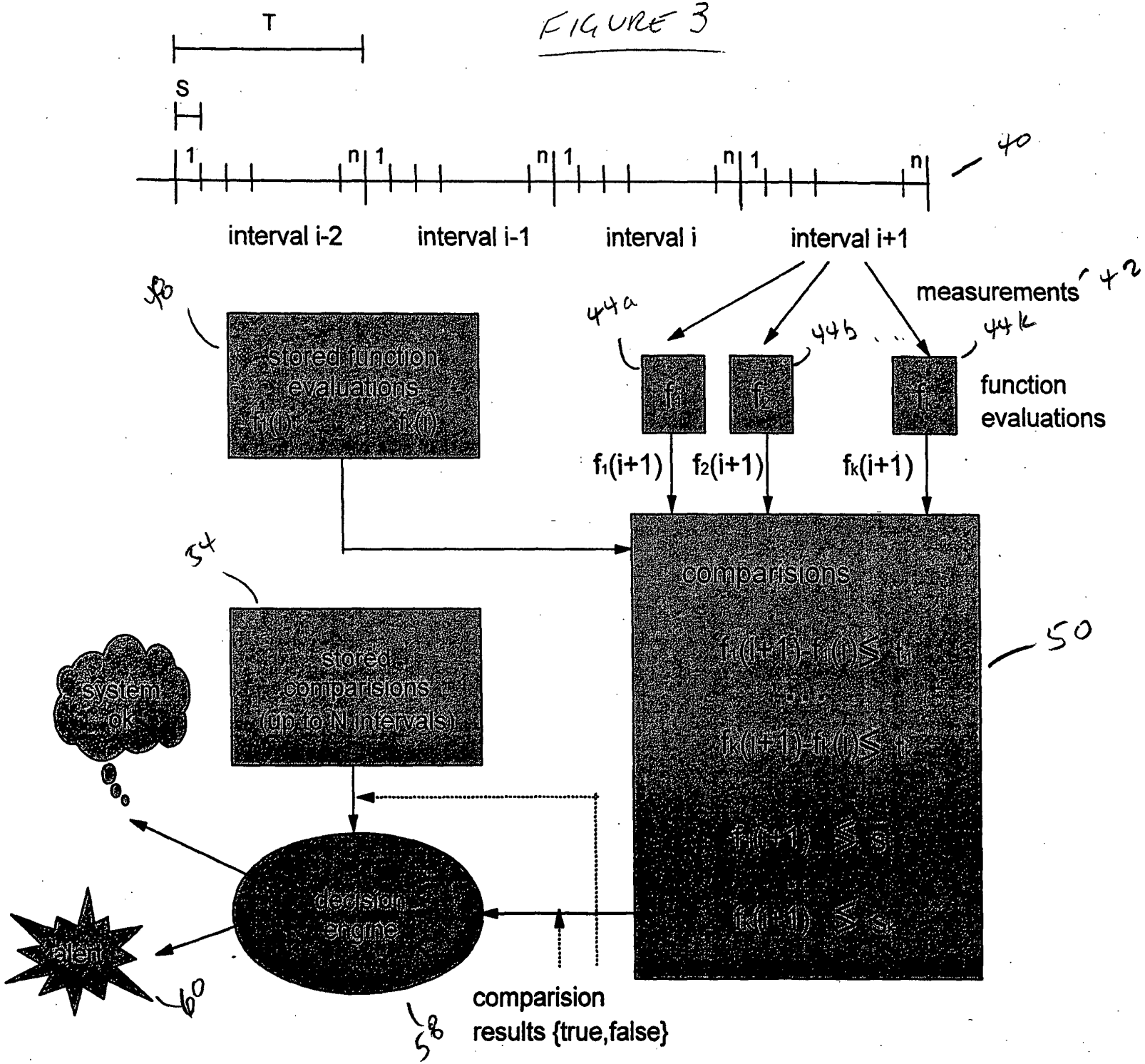
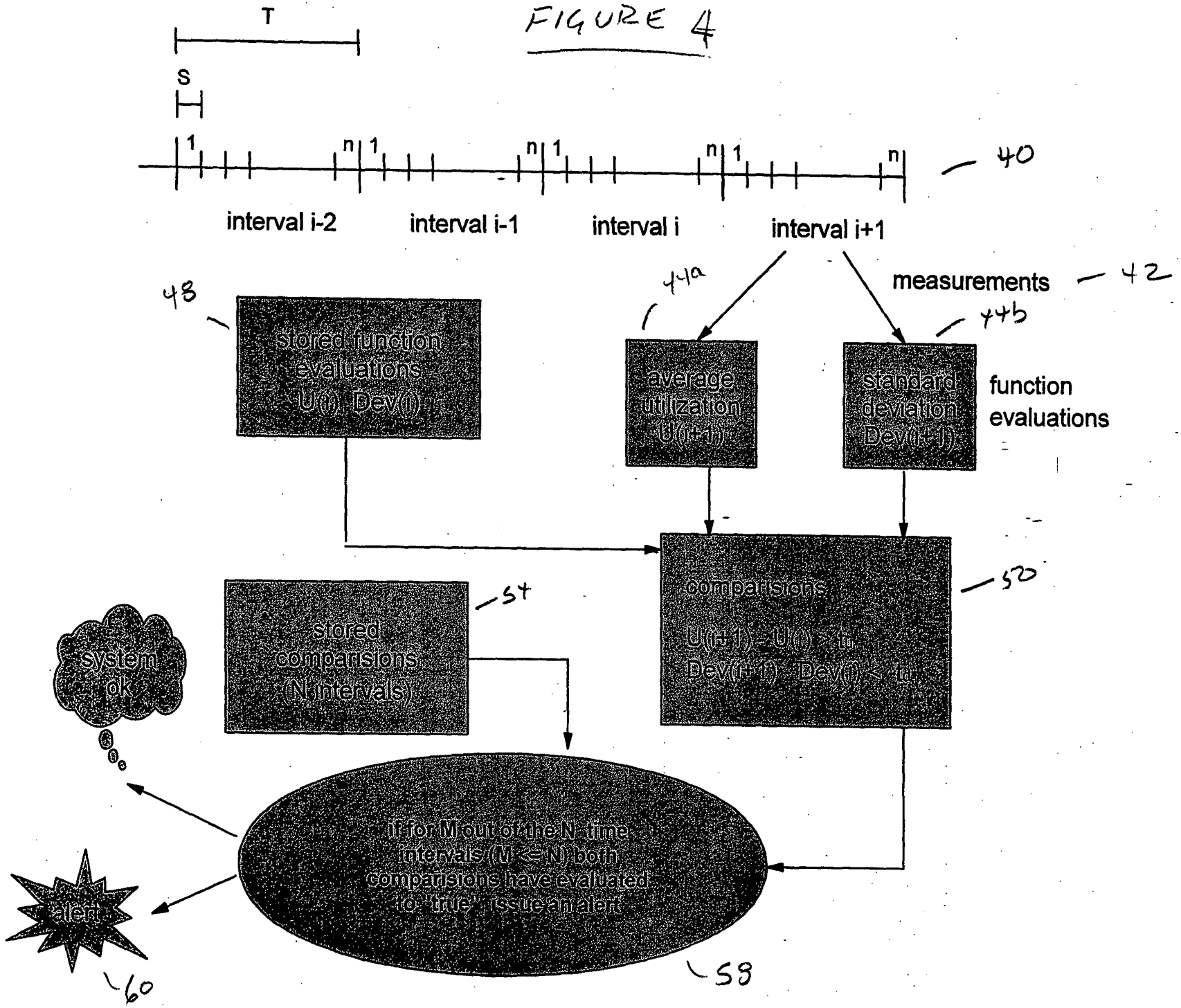

T
S
1
n
40
interval i-2
interval i-1
interval i
interval i+1
46
stored function evaluations
f1(i) ... fk(i)
44a
44b
44k
measurements
42
f1
f2
fk
function evaluations
f1(i+1)
f2(i+1)
fk(i+1)
54
stored comparisons (up to N intervals)
comparisons
f1(i+1)-f1(i)≤ t1
f2(i+1)-f2(i)≤ t2
fk(i+1)-fk(i)≤ tk
f1(i+1) ≤ s1
f2(i+1) ≤ s2
fk(i+1) ≤ sk
50
system ok
decision engine
alert
60
58
comparision results {true,false}

FIGURE 4


T
S
1
n
1
n
1
n
1
n
40
interval i-2
interval i-1
interval i
interval i+1
measurements
42
44a
44b
48
stored function evaluations U(i), Dev(i)
average utilization U(i+1)
standard deviation Dev(i+1)
function evaluations
comparisons
U(i+1) - U(i) < th
Dev(i+1) - Dev(i) < th
52
54
stored comparisons (N intervals)
system ok
if for M out of the N time intervals (M <= N) both comparisons have evaluated to "true", issue an alert
alert
58
60